

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A method for the deposition and alignment of carbon nanotubes, comprising the steps of:

- providing an assembly that comprises a substrate having at least two electrodes supported thereon and opposing one another with a gap region being defined therebetween;
- depositing a carbon nanotube (CNT) attraction material on said substrate in said gap region;
- applying an electric potential to said two opposing electrodes wherein an electric field is generated across said gap region;
- wetting said CNT attraction material with a solution defined by a carrier liquid having carbon nanotubes (CNTs) suspended therein, wherein a first portion of said CNTs are aligned with said electric field and adhered to said CNT attraction material, and wherein a second portion of said CNTs are not adhered to said CNT attraction material; and
- removing said carrier liquid and said second portion of said CNTs from said assembly.

Claim 2 (previously presented): A method according to claim 1 wherein said step of removing comprises the step of blowing a gas over said assembly until said carrier liquid is no longer present thereon to thereby form a final assembly.

Claim 3 (previously presented): A method according to claim 2 wherein said step of removing further comprises the steps of:

- wetting said final assembly with a rinse liquid that can support suspension therein of any of said second portion of said CNTs remaining after said step of blowing;
- vibrating said wetted final assembly; and
- blowing a gas over said final assembly after being wetted and vibrated to remove said rinse liquid and any of said second portion of sand CNTs suspended therein.

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Claim 4 (previously presented): A method according to claim 3 wherein said rinse liquid is n-methylpyrrolidone.

Claim 5 (previously presented): A method according to claim 3 wherein said gas used in each said step of blowing is nitrogen gas.

Claim 6 (previously presented): A method according to claim 3 wherein said step of vibrating comprises the step of transmitting acoustic wave energy towards said wetted final assembly.

Claim 7 (previously presented): A method according to claim 1 wherein said electric potential is one of AC potential and DC potential.

Claim 8 (currently amended): A method ~~according to claim 1~~ for the deposition and alignment of carbon nanotubes, comprising the steps of:

providing an assembly that comprises a substrate having at least two electrodes supported thereon and opposing one another with a gap region being defined therebetween;

depositing a carbon nanotube (CNT) attraction material on said substrate in said gap region;

applying an electric potential to said two opposing electrodes wherein an electric field is generated across said gap region;

wetting said CNT attraction material with a solution defined by a carrier liquid having carbon nanotubes (CNTs) suspended therein, wherein a first portion of said CNTs are aligned with said electric field and adhered to said CNT attraction material, and wherein a second portion of said CNTs are not adhered to said CNT attraction material; and

removing said carrier liquid and said second portion of said CNTs from said assembly;
wherein said CNT attraction material is a self-assembled monolayer.

Claim 9 (currently amended): A method ~~according to claim 1~~ for the deposition and alignment of carbon nanotubes, comprising the steps of:

providing an assembly that comprises a substrate having at least two electrodes supported thereon and opposing one another with a gap region being defined therebetween;

depositing a carbon nanotube (CNT) attraction material on said substrate in said gap region;
applying an electric potential to said two opposing electrodes wherein an electric field is
generated across said gap region;

wetting said CNT attraction material with a solution defined by a carrier liquid having
carbon nanotubes (CNTs) suspended therein, wherein a first portion of said CNTs are aligned with
said electric field and adhered to said CNT attraction material, and wherein a second portion of said
CNTs are not adhered to said CNT attraction material; and

removing said carrier liquid and said second portion of said CNTs from said assembly;
wherein said CNT attraction material forms at least one hydrogen bond with a sidewall of each CNT
from said first portion of said CNTs.

Claim 10 (previously presented): A method according to claim 1 wherein said CNTs are single-wall CNTs.

Claim 11 (previously presented): A method according to claim 1 wherein said carrier liquid minimizes van der Waal forces between said CNTs suspended therein.

Claim 12 (previously presented): A method for the deposition and alignment of carbon nanotubes, comprising the steps of:

providing an assembly that comprises a substrate having at least two electrodes supported thereon and opposing one another with a gap region being defined therebetween;

depositing a CNT attraction material on at least portions of each of said two opposing electrodes and on said substrate in said gap region between said portions of each of said two opposing electrodes;

applying an electric potential to said two opposing electrodes wherein an electric field is generated across said gap region;

wetting said CNT attraction material with a solution defined by a carrier liquid having CNTs suspended therein, wherein a first portion of said CNTs are aligned with said electric field and adhered to said CNT attraction material, and wherein a second portion of said CNTs are not adhered to said CNT attraction material; and

removing said carrier liquid and said second portion of said CNTs from said assembly.

Claim 13 (previously presented): A method according to claim 12 wherein said step of removing comprises the step of blowing a gas over said assembly until said carrier liquid is no longer present thereon to thereby form a final assembly.

Claim 14 (previously presented): A method according to claim 13 wherein said step of removing further comprises the steps of:

wetting said final assembly with a rinse liquid that can support suspension therein of any of said second portion of said CNTs remaining after said step of blowing;

Claim 15 (previously presented): A method according to claim 14 wherein said rinse liquid is a n-methylpyrrolidone.

Claim 16 (previously presented): A method according to claim 14 wherein said gas used in each said step of blowing is nitrogen gas.

Claim 17 (previously presented): A method according to claim 14 wherein said step of vibrating comprises the step of transmitting acoustic wave energy towards said wetted final assembly.

Claim 18 (previously presented): A method according to claim 12 wherein said electric potential is one of AC potential and DC potential.

Claim 19 (currently amended): A method ~~according to claim 12~~ for the deposition and alignment of carbon nanotubes, comprising the steps of:

providing an assembly that comprises a substrate having at least two electrodes supported thereon and opposing one another with a gap region being defined therebetween;

depositing a CNT attraction material on at least portions of each of said two opposing electrodes and on said substrate in said gap region between said portions of each of said two opposing electrodes;

applying an electric potential to said two opposing electrodes wherein an electric field is generated across said gap region;

wetting said CNT attraction material with a solution defined by a carrier liquid having CNTs suspended therein, wherein a first portion of said CNTs are aligned with said electric field and adhered to said CNT attraction material, and wherein a second portion of said CNTs are not adhered to said CNT attraction material; and

removing said carrier liquid and said second portion of said CNTs from said assembly;
wherein said CNT attraction material is a self-assembled monolayer.

Claim 20 (currently amended): A method ~~according to claim 12~~ for the deposition and alignment of carbon nanotubes, comprising the steps of:

providing an assembly that comprises a substrate having at least two electrodes supported thereon and opposing one another with a gap region being defined therebetween;

depositing a CNT attraction material on at least portions of each of said two opposing electrodes and on said substrate in said gap region between said portions of each of said two opposing electrodes;

applying an electric potential to said two opposing electrodes wherein an electric field is generated across said gap region;

wetting said CNT attraction material with a solution defined by a carrier liquid having CNTs suspended therein, wherein a first portion of said CNTs are aligned with said electric field and adhered to said CNT attraction material, and wherein a second portion of said CNTs are not adhered to said CNT attraction material; and

removing said carrier liquid and said second portion of said CNTs from said assembly;
wherein said CNT attraction material forms at least one hydrogen bond with a sidewall of each CNT from said first portion of said CNTs.

Claim 21 (previously presented): A method according to claim 12 where said CNTs are single-wall CNTs.

Claim 22 (previously presented): A method according to claim 12 wherein said carrier liquid minimizes van der Waals forces between said CNTs suspended therein.

Claim 23 (previously presented): A method for the deposition and alignment of carbon nanotubes, comprising the steps of:

- providing an assembly that comprises a substrate having at least two electrodes supported thereon and opposing one another with a gap region being defined therebetween;

- depositing a monolayer material on said substrate in said gap region, said monolayer material being capable of forming at least one hydrogen bond with a sidewall of a carbon nanotube when coming into contact therewith;

- applying an electric potential to said two opposing electrodes wherein an electric field is generated across said gap region;

- wetting said monolayer material with a solution defined by a carrier liquid having CNTs suspended therein, wherein a first portion of said CNTs are aligned with said electric field and come into contact with said monolayer material and are bonded thereto, and wherein a second portion of said CNTs do not come into contact with said monolayer material and are not bonded thereto; and

- removing said carrier liquid and said second portion of said CNTs from said assembly.

Claim 24 (previously presented): A method according to claim 23 wherein said step of removing comprises the step of blowing a gas over said assembly until said carrier liquid is no longer present thereon to thereby form a final assembly.

Claim 25 (previously presented): A method according to claim 24 wherein said step of removing further comprises the steps of:

- wetting said final assembly with a rinse liquid that can support suspension therein of any of said second portion of said CNTs remaining after said step of blowing;

- vibrating said wetted final assembly; and

- blowing a gas over said final assembly after being wetted and vibrated to remove said rinse liquid and any of said second portion of said CNTs suspended therein.

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Claim 26 (previously presented): A method according to claim 25 wherein said rinse liquid is a n-methylpyrrolidone.

Claim 27 (previously presented): A method according to claim 25 wherein said gas used in each said step of blowing is nitrogen gas.

Claim 28 (previously presented): A method according to claim 25 wherein said step of vibrating comprises the step of transmitting acoustic wave energy towards said wetted final assembly.

Claim 29 (previously presented): A method according to claim 23 wherein said electric potential is one of AC potential and DC potential.

Claim 30 (previously presented): A method according to claim 23 wherein said CNTs are single-wall CNTs.

Claim 31 (previously presented): A method according to claim 23 wherein said carrier liquid minimizes van der Waal forces between said CNTs suspended therein.